AMENDMENTS TO THE CLAIMS

1. (Original) A microlens comprising:

a first light conductor having at least one concave recess; and

a second light conductor within said at least one recess.

2. (Original) The microlens of claim 1, wherein a topmost surface of said first light conductor is planar to a topmost surface of said second light conductor.

3. (Original) The microlens of claim 1, wherein said second light conductor has a peripheral portion formed over a topmost surface of said first light conductor.

4. (Original) The microlens of claim 1, wherein said first light conductor has a first index of refraction and said second light conductor has a second index of refraction that is different from said first index of refraction.

5. (Original) The microlens of claim 4, wherein said first index of refraction is less than said second index of refraction.

6. (Original) The microlens of claim 1, wherein said first light conductor is formed of material selected from the group consisting of glass, an optical thermoplastic material, a polyimide, a thermoset resin, a photosensitive gelatin, and a radiation curable resin.

7. (Original) The microlens of claim 1, wherein said second light conductor is formed of material selected from the group consisting of glass, an optical thermoplastic material, a polyimide, a thermoset resin, a photosensitive gelatin, and a radiation curable resin.

8. (Original) The microlens of claim 1, wherein a lower surface of said microlens is planar.

9. (Original) The microlens of claim 1, further comprising a color filter formed over said second light conductor.

10. (Original) The microlens of claim 1, further comprising a color filter formed below said first light conductor.

11. (Currently amended) A microlens ~~over a photosensor~~, ~~said microlens~~ comprising:

a first light transmissive layer having an output surface and a receiving surface, the receiving surface having a concavity therein; and

a second light transmissive layer in the concavity; the second light transmissive layer having an input surface and a transmitting surface that meets the receiving surface at a boundary;

light entering the input surface being refracted at the boundary before exiting the output surface.

12. (Original) The microlens of claim 11, wherein said second light transmissive layer has a higher index of refraction than that of said first light transmissive layer.

13. (Original) A microlens array comprising:

a first light conductor having a plurality of concave recesses; and

a second light conductor within each recess and over said first light conductor.

14. (Original) The microlens array of claim 13, wherein said second light conductor has a peripheral portion formed over a topmost surface of said first light conductor.

15. (Original) The microlens array of claim 13, wherein said plurality of concave recesses contact each other.

16. (Original) The microlens array of claim 13, wherein said plurality of concave recesses are coextensive with each other.

17. (Original) The microlens array of claim 13, wherein said plurality of concave recesses have an elongated shape.

18. (Currently amended) A pixel cell comprising:

a photosensor at a surface of a substrate;

a microlens over said photosensor; said microlens comprising:

a first light transmissive layer having an output surface and a receiving surface, the receiving surface having a concavity therein; and

a second light transmissive layer in the concavity; the second light transmissive layer having an input surface and a transmitting surface that meets the receiving surface at a boundary~~;~~, wherein light entering the input surface is ~~being~~ refracted toward said photosensor at the boundary before exiting the output surface; and

readout circuitry that provides signals from the photosensor.

19. (Currently amended) The pixel cell of claim 18, wherein an area of said microlens ~~area~~ is greater than an area ~~that~~ of said photosensor ~~photosensor's area~~.

20. (Original) The pixel cell of claim 18, wherein said microlens is centered over said photosensor.

21. (Original) A light detecting system comprising:

a substrate having a plurality of photosensitive regions; and

a microlens array formed over said plurality of photosensitive regions; said microlens array comprising:

a first light conductor having a plurality of concave recesses; and

a second light conductor within each recess and over said first light conductor.

22. (Original) The light detecting system of claim 21, wherein said first light conductor is located proximally to said photosensitive region, and said second light conductor is located peripherally from said photosensitive region.

23. (Original) The light detecting system of claim 21, wherein said second light conductor has a peripheral portion formed over a topmost surface of said first light conductor.

24. (Original) The light detecting system of claim 21, wherein said plurality of concave recesses contact each other.

25. (Original) The light detecting system of claim 21, wherein said plurality of concave recesses are coextensive with each other.

26. (Original) The light detecting system of claim 21, wherein said plurality of concave recesses have an elongated shape.

27. (Original) An integrated circuit comprising:

a substrate having a plurality of photosensitive regions; and

a microlens array formed over said plurality of photosensitive regions; said microlens array comprising:

a first light conductor having a plurality of concave recesses;

a second light conductor within each recess and over said first light conductor; and

readout circuitry within said substrate, said readout circuitry providing signals from the photosensitive region.

28. (Original) An image processing system comprising:

a processor; and

an imaging device coupled to said processor, said imaging device comprising an imaging array containing a plurality of photosensitive regions provided in a substrate, and a microlens formed over each of said plurality of photosensitive regions, each microlens comprising:

a first light conductor having at least one concave recess; and

a second light conductor within said at least one recess.

29. (Original) The image processing system of claim 28, wherein a topmost surface of said first light conductor is planar to a topmost surface of said second light conductor.

30. (Original) The image processing system of claim 28, wherein said first light conductor has a first index of refraction and said second light conductor has a second index of refraction that is different from said first index of refraction.

31. (Original) A method of forming a microlens, said method comprising:

a first light conductor having at least one concave recess; and

a second light conductor within said at least one recess.

32. (Original) A method of forming a microlens, said method comprising:

providing a first light transmissive layer having an output surface and a receiving surface, the receiving surface having a concavity therein; and

providing a second light transmissive layer in the concavity; the second light transmissive layer having an input surface and a transmitting surface that meets the receiving surface at a boundary, such that light entering the input surface being refracted at the boundary before exiting the output surface.

33. (Original) A method of forming an imaging device, said method comprising:

providing a substrate having a plurality of photosensitive regions; and

forming an array of microlenses, the array including a respective microlens over each of said plurality of photosensitive regions by:

forming a first light conductor having at least one concave recess over each of said photosensitive regions; and

forming a second light conductor within each of said at least one recess.

34. (Original) The method of claim 33, further comprising planarizing each second light conductor such that a topmost surface of said first light conductor is planar to a topmost surface of said second light conductor.

35. (Original) The method of claim 33, further comprising planarizing each first light conductor such that a topmost surface of said second light conductor is planar to a topmost surface of said first conductor.

36. (Original) The method of claim 33, further comprising the act of forming a color filter between said substrate and said second light conductor.

37. (Original) The method of claim 33, wherein each first light conductor has a first index of refraction and each second light conductor has a second index of refraction that is different from said first index of refraction.

38. (Original) The method of claim 33, wherein at least one of said first light conductors is formed of a material selected from the group comprising of glass, an optical thermoplastic material, a polyimide, a thermoset resin, a photosensitive gelatin, and a radiation curable resin.

39. (Original) The method of claim 33, wherein at least one of said second light conductors is formed of a material selected from the group

comprising of glass, an optical thermoplastic material, a polyimide, a thermoset resin, a photosensitive gelatin, and a radiation curable resin.

40. (Original) The method of claim 33, wherein said at least one concave recess is formed by chemical etching said first light conductor.

41. (Original) The method of claim 33, wherein said at least one concave recess is formed by reactive ion etching said first light conductor.

42. (Original) A method of forming an integrated circuit, said method comprising:

forming a substrate having a plurality of photosensitive regions; and

forming a microlens array over said plurality of photosensitive regions; said act of forming a microlens array comprising:

forming a first light conductor having a plurality of concave recesses;

forming a second light conductor within each recess and over said first light conductor; and

forming readout circuitry within said substrate, said readout circuitry providing signals from the photosensitive region.

43. (Original) A method of forming an imaging device, said method comprising:

providing a substrate having a plurality of photosensitive regions; and

forming a microlens array over said plurality of photosensitive regions by:

forming a first light conductor having a plurality of concave recesses over said photosensitive regions; and

forming a second light conductor within each recess and over said first light conductor.

44. (Original) The method according to claim 43, wherein said forming of a plurality of concave recesses are formed such that said recesses are in contact with each other.

45. (Original) The method according to claim 43, wherein said forming of plurality of concave recesses are formed such that said recesses are coextensive with each other.

46. (Original) The method according to claim 43, wherein said forming of a plurality of concave recesses are formed such that said recesses have an elongated shape.